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DYNAMIC EQUILIBRIUM IN THERAPEUTIC SITUATIONS.

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THE CONCEPT OF DYNAMIC EQUILIBRIUM IS USED TO EXAMINE THE OCCURRENCE OF CHANGE IN A THERAPEUTIC INTERVIEW AND TO PROPOSE A THEORY OF THERAPY. BY ANALYZING THE WORKINGS OF THE PSYCHOSOCIAL SYSTEM THROUGH THE GENERAL SYSTEMS THEORY, IT IS POSSIBLE TO SEE HOW CHANGE OCCURS IN AN INDIVIDUAL FAMILY OR COMMUNITY. APPLIED TO A FAMILY INTERVIEW, THE MODEL INDICATES THAT THE INTERVIEWER PLAYS A DISTURBING ROLE IN ORDER TO RENDER A STABLE SYSTEM UNSTABLE AND TO INDUCE A NEW LEVEL OF STABILITY. IT IS SUGGESTED THAT THE PROCESS OF THERAPY CONSISTS OF A LONG SERIES OF SUCH EQUILIBRIA, DISEQUILIBRIA, AND NEW EQUILIBRIA. TO DETERMINE THE DYNAMIC EQUILIBRIUM OF ANY SOCIAL SYSTEM, THE INITIAL STATE OF THE SYSTEM, THE ADEQUACY OF REGULATORY RESOURCES, THE CONSTANCY OF THE ENVIRONMENT, NATURE, FORCE, RATE, AND SEQUENCE OF DISTURBANCES, AND THE CONSEQUENT LEVEL OF ANXIETY MUST BE ASSESSED. THEN, THE EFFORT REQUIRED TO INDUCE CHANGE MAY BE ESTIMATED. THIS SPEECH WAS PRESENTED AT THE 1967 ANNUAL MEETING OF THE AMERICAN ORTHOPSYCHIATRIC ASSOCIATION, WASHINGTON, D.C., MARCH 21, 1967. REPRINT REQUESTS MAY BE ADDRESSED TO 8201 PONCE DE LEON ROAD, MIAMI, FLORIDA 33143. (NS)

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DYNAMIC EQUILIBRIUM IN THERAPEUTIC SITUATIONS

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INTRODUCTION

Dynamic equilibrium indicates a steady state maintained by the interaction of forces in a complex interacting system. This concept will be used to examine the occurrence of change in a therapeutic interview, to propose a theory of therapy, and to suggest some reasons for therapeutic failure.

EQUILIBRIUM

To begin, let me first evoke a couple of images about equilibrium. Call to mind a tall, straight oak tree standing in the forest, the survivor of hundreds of storms. I have watched a woodsman fell such a tree on a still, windless day. He first cut a notch in one side of the tree, then, from the other side, cut almost through the base of the tree. Then he stood back, made a last survey, put his strength against the tree and literally pushed it over.

Or, to make a more peaceful bucolic image, we can imagine a few farmers liesurely walking over to the auction. A man from town joins them and falls in with their measured talk and pace. Before long, he has increased his tempo just a shade, and the other members of the group do likewise. Again he speeds up just a little, and so on, and they all arrive at the auction like a bunch of townspeople.

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SYSTEMS AND MODELS

If we looked for models to fit our two examples, the first might be explained by classical statics including the composition of forces, but this is of little value when we try to formally describe the interactions of the group of country people.

Complex interactions of this sort are especially common in living things, and were studied a century ago by Claude Bernard, and a half-century ago by Walter Cannon, who used the term homeostasis. World War II saw the introduction of a number of complex interacting machines. It was soon realized that different kinds of systems, weapons systems, telephone systems, economic systems, ecologic systems, and nervous systems had many similarities. The study of the common properties of systems became known as General Systems Theory (1,2). The systems method is appropriate to handling the problems found in complex systems.

W. Ross Ashby, a psychiatrist and a prominent contributor to General Systems Theory, has worked for many years on what sort of a machine is the brain, and what enables it to be stable or unstable. Ashby defines a stable system as one that, left undisturbed over a unit of time, remains unchanged. An unstable system, left undisturbed over a unit of time, changes. In Ashby's model, a system is impinged upon a disturbance, to which it reacts by regulatory activities so as to limit the effect of the disturbance upon the system. More specifically, the system is conceptually divided into a set of environmental variables, and a set of regulatory variables, both of which are affected by a set of disturbances (3). This is shown in Figure 1, where E is the set of environmental variables, F is the set of regulator variables, D is a set of disturbances affecting both E and F, Z is the set of outcomes, of which there is a desirable subset G. The time scale indicates that a disturbance at time zero results in a

reaction at time one, and an outcome at time two. The set D can also be conceptualized as the set of initial states, and the Z of one interval is the D of the next interval. (Insert Figure 1 here.)

In a stable system, the range and capacity of F is such as to limit the effect of any encountered disturbance D, so that the outcome is zero, or is limited to G. In an unstable system, the disturbance is not contained by a regulatory function, and an outcome Z results, which changes the system.

STUDY OF AN INTERVIEW

Let me mention an application of this model in the psychiatric field. In a research study of family interviews, we intensively studied the last of a series of six interviews with a family by one interviewer. This interview with the mother and father was analyzed, using Ashby's model and various chronographic and behavior rating scales. This work is the topic of a research report which is available, and the details will be omitted here (4). To give a brief summary, the family pattern for several years was that of a striving, sharp-tongued, worried mother, exhorting the two oldest children, now adolescent boys, and their easy-going father, who made excuses for the boys. There were countless episodes, but the general pattern was constant, and the first five interviews, with various segments of the family, gave no promise of any change. In the sixth interview, the mother and father are carrying on a conversation as they enter the interview room, and for a few minutes the three of them continue this conversation. The mother, with some help from the father, then holds forth, giving redundant information about the family problems. After about nine minutes, the interviewer introduced disturbances (such as pointed changes of topic, aggressive questioning, and inquiry about feelings and relationships). The mother and father reacted with regulatory measures, monopolizing the

floor, interrupting each other, and completely shutting out the interviewer for seventeen minutes. Then, with the interview half over, the interviewer came back with more disturbances. The parents again reacted to this with increased activity which shut out the interviewer. With nine minutes left to go, the interviewer again intervened, and here the parents did not block him, but instead entered into a very sincere and emotionally charged dialogue with him, with changes in the parents expressed attitudes.

The interviewer understood this family, and reassured them by his understanding and acceptance. But, in the sixth interview, he also sharply questioned their conception of their relationships, stirred up anxiety, and produced instability. This instability then led to a new definition of themselves, and a new and potentially more pleasant stability.

INFORMATION, RELATIONSHIP AND DECISION

By plotting the values of the various behavioral scales on charts, we felt we were able to identify the bumps that indicated disturbance, regulatory activity, and outcome or change. By comparing these with the clinical content, we saw that the regulator parts of the interview correspond to Information. That is, information predominantly served a defensive function.

The disturbances introduced by the interviewer often were concerned with a personal Relationship. Change was marked by both interviewer and parents talking about relationships, and new information in the context of relationship lead to Decisions.

THEORY OF THERAPY

Let us look at stable and unstable situations and therapy. Psychoanalysis practically requires a stable system. The psychoanalyst asks for a situation without pressure of time, and specifies that no major decisions be made without adequate prior discussion. He works to thoroughly

understand the patient's system, and to become a part of it, and only then does he introduce small corrections, in a specific and planned way, with predictable outcome, and he is ready to wait for the right moment. He considers crisis or other situations requiring urgent decisions as outside the domain of analysis and, if they occur, he may step out of the picture temporarily, or at least let it be known that he is functioning outside the analytic role.

The task of the analyst is to take a stable, unsatisfactory personality and, by a long series of disequilibria and reequilibria under the controlled conditions of the psychoanalytic situation, produce a stable, autonomous, satisfactory personality. That is, after analysis the individual is expected to possess a set of self motivating and potentially disturbing drives, effective regulatory ego functions, and realistic super-ego controls that will enable him to cope in an average expected environment.

From the conceptual standpoint, the general task of the psychotherapist is similar to that of the analyst. His job is to get into phase with his patient, understand him, communicate that understanding to him, and thereby lessen his anxiety and reduce his fears of his own illness, and his fears of the therapist. The therapist then shifts out of phase a minor degree in the direction he deems beneficial for the patient, and induces the patient to come into phase with him. The shift out of phase must be so minor that it can be readily incorporated by the patient into his scheme of things, and be felt as an ego-syntonic exercise of flexibility, rather than as an anxiety-inducing disturbance that may wreck his stability.

It is as though the therapist says, "I'm listening to you. I understand you. We are together, all except this one very minor point, and I'm sure you will agree with me about this." The first is called history taking, the second, rapport, and the third, interpretation.

CRISIS INTERVENTION

As mentioned before, a system in an unstable state, left undisturbed over a period of time, changes. In our business, these are the situations where some overwhelming event -- birth, death, accident, illness, natural disaster, migration -- has presented a disturbance beyond the scope of the individual's or his family's regulatory resources. These crises are accompanied by marked anxiety, which may further tax the regulatory capacity. In such emergencies, the usual regulatory measures break down, relationships are fluid, the stranger barrier weakens, and any extended hand is clasped onto. There is no time for a calm and judicious study of the situation. Action is needed and action is responded to. If one is willing, one is immediately part of the system.

The goal in crisis intervention is the reestablishment of stability. The lost child and his family are reunited. A community destroyed by flood is reestablished. In terms of our equilibrium model, the rescuer is now part of the regulatory function, helping to limit the impact of the disturbance, and hold the system together. The duties of such a rescuer are quite different from those of the usual therapist role. Intervention in time of crisis cannot stop change, but it can be very important in influencing the direction and final result of a process of change.

STABILITY AND SIZE OF UNIT

The therapist initiating treatment must visualize the end-point that he hopes to reach. If we are dealing with a unit for which no stable self-regulating end-point can be expected, then perhaps we should not treat that unit. For instance, in the case of the mentally retarded child, or a person with a marked ego defect, we cannot expect that the individual will

ever be self-regulating, but it is quite possible that such an individual can be part of a stable family system, and if so, it is the integration of the impaired individual into this system that should be the focus of our major effort.

The same considerations may apply to other therapeutic problems, for instance the "hard-core" family. Here the disturbances may be of such magnitude that any effort directed to the individual family may simply be irrelevant, and perhaps some larger unit might be the more pertinent unit for stability.

RESEARCH

We need a great deal of research in this area to determine the size and shape of stable systems, whether these be individuals, or families, or communities, or nations. By specifying the disturbances that affect such systems, and the regulatory mechanisms needed to meet these disturbances, we might better be able to under stand, predict, and control the instabilities in these systems.

CONCLUSIONS

Methods are now being developed that make explicit the workings of complex systems, including psychosocial systems. One of these methods, applied to a family interview indicated that the interviewer played a disturbing role in order to render a stable system unstable, and induce a new level of stability.

It is suggested that the process of therapy consists of a long series of such equilibria, disequilibria, and new equilibria.

In assessing any social system, we must take into account the initial state of the system, the adequacy of regulatory resources, the constancy of the environment, the nature, force, rate and sequence of disturbances and the consequent level of anxiety, in order to determine the

dynamic equilibrium of the system. We must know this dynamic equilibrium if we are to make an estimate of the nature and magnitude of the effort required to induce changes in the system.

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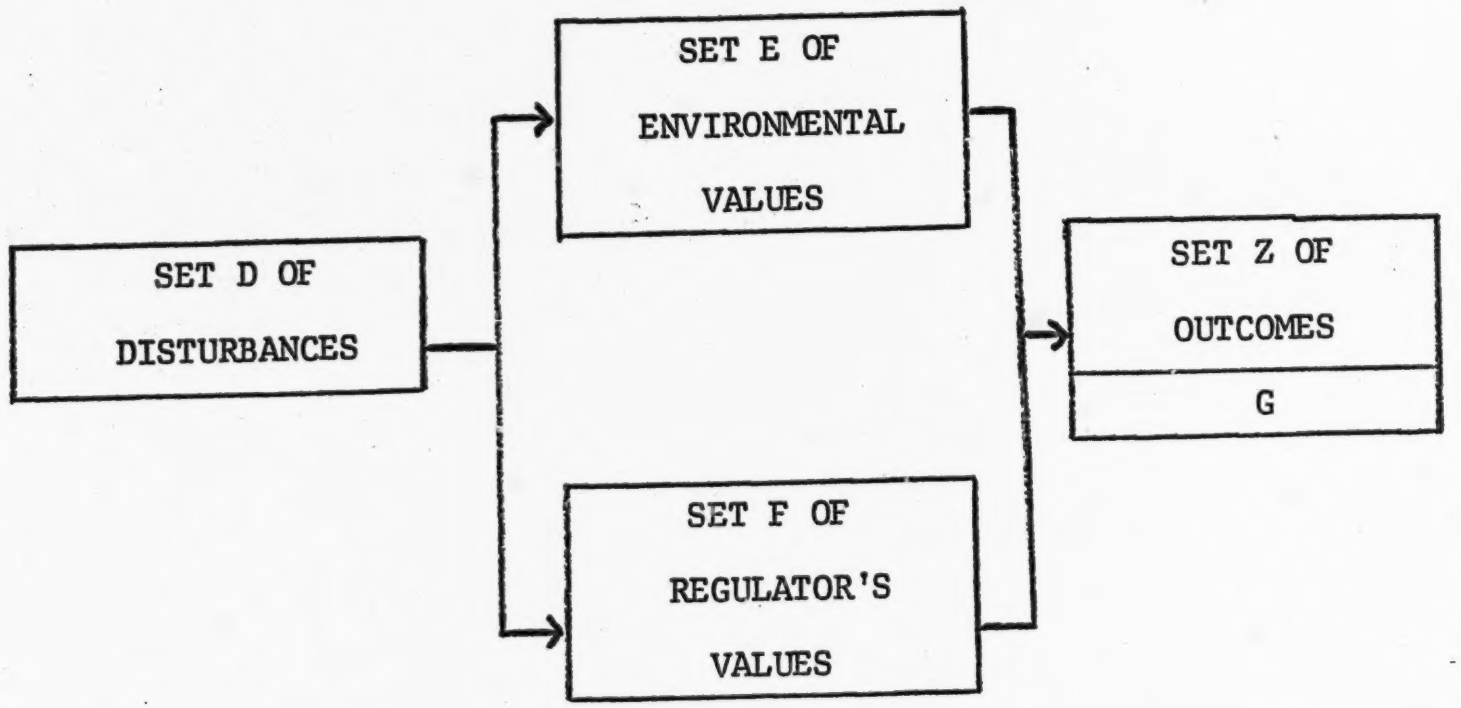

FIGURE 1. Ashby's Diagram of a System